

549, #17

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 September 2004 (30.09.2004)

PCT

(10) International Publication Number
WO 2004/084344 A1

(51) International Patent Classification⁷:
21/24, 9/04, 1/38

H01Q 1/24,

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:

PCT/EP2004/001503

(22) International Filing Date: 18 February 2004 (18.02.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03075785.0	18 March 2003 (18.03.2003)	EP
60/458,170	27 March 2003 (27.03.2003)	US

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): **SONY ERICSSON MOBILE COMMUNICATIONS AB** [SE/SE]; Lund 221 88 (SE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **YING, Zhinong** [SE/SE]; Skyttelinjen 50, Lund 226 49 (SE).

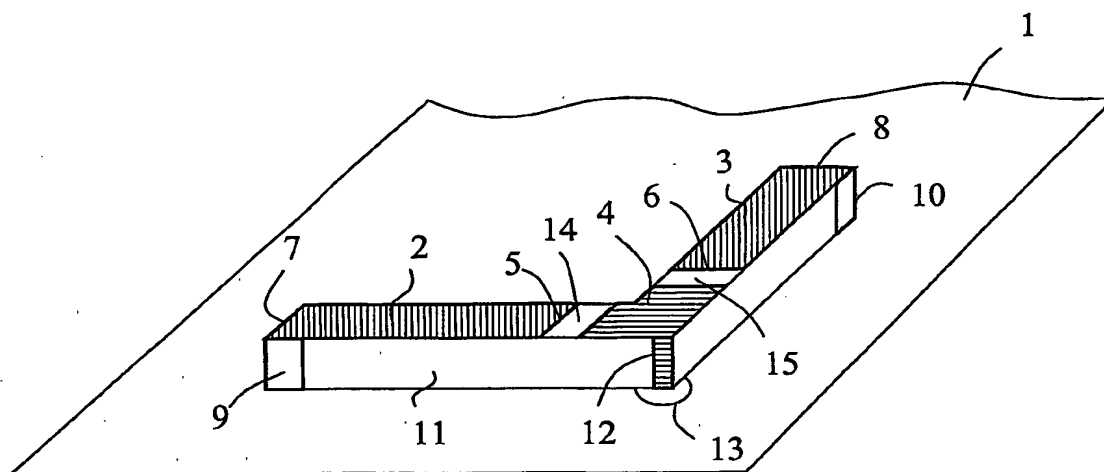
(74) Agents: **LINDBERG, Olle et al.**; c/o Albihts Malmö AB, P.O. Box 4289, 203 14 Malmö (SE).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

[Continued on next page]

(54) Title: **COMPACT DIVERSITY ANTENNA**



(57) Abstract: A diversity radio antenna, comprising a ground substrate (1), first and second elongated antenna elements (2,3), each extending between respective first (5,6) and second opposing ends (7,8) in a plane parallel to and spaced from said ground substrate, and an excitation electrode (4) interposed between said respective first ends. Ground connector switch means (9,10) are devised to selectively connect and disconnect said ground substrate to said antenna elements, for controlling radiation beam pattern and polarisation diversity of the antenna. This way, said ground connector switch means are devised to selectively connect said first and second antenna elements to ground for adapting the antenna to a circularly-polarised radio wave, or disconnect one of said first and second antenna elements from ground for adapting the antenna to a linearly-polarised radio wave.

WO 2004/084344 A1



— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.